

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A pre-release structure configured to form [[of]] a micro electro mechanical system upon removal of a sacrificial layer through a structure release etch process, said micro electro mechanical system suitable to use on an optical interference display cell, the pre-release structure of a micro electro mechanical system comprising:

a first electrode that is partially transmissible and partially reflective;

a second electrode that is reflective comprising:

a first material layer; and

a conductor layer set on the first material layer and approximately in parallel to the first electrode, wherein the first material layer is positioned between the conductor layer and the first electrode; [[and]]

a sacrificial layer positioned between the first material layer and the first electrode; and

a supporter configured to separate the first electrode from the first material layer to form a cavity upon structure release etching;

wherein the conductor layer is susceptible to etching by an etchant suitable to remove the sacrificial layer and wherein the first material layer is adapted to protect the second electrode from etching when [[a]] the sacrificial layer between the first electrode and the first material layer is removed through a structure release etch process to form the cavity using the etchant.

2. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the material of the sacrificial layer is selected from the group consisting of dielectric material, metal material or silicon material.

3. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, further comprising a second material layer covering the second electrode.

4. (CURRENTLY AMENDED) [[The]] A structure of a micro electro mechanical system comprising:

a first electrode;

a second electrode comprising:

a first material layer; and
a conductor layer set on the first material layer and approximately in parallel to the first electrode; and
a supporter configured to separate the first electrode from the first material layer to form a cavity;

a second material layer set on the second electrode; and
a spacer set on the sidewalls of the second electrode and the first material layer; wherein the first material layer is adapted to protect the second electrode from etching when a sacrificial layer between the first electrode and the first material layer is removed through a structure release etch process to form the cavity.

5. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the material of the first material layer is selected from the group consisting of silicon material, dielectric material, transparent conductor material, macromolecule polymer, metal oxide and any arbitrary combination thereof.

6. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 3, wherein the material of the second material layer is selected from the group consisting of silicon material, dielectric material, transparent conductor material, macromolecule polymer, metal oxide and any arbitrary combination thereof.

7. (CURRENTLY AMENDED) The structure of a micro electro mechanical system of claim 4, wherein the material of the spacer is selected from the group consisting of silicon material, dielectric material, transparent conductor material, macromolecule polymer, metal oxide and any arbitrary combination thereof.

8. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 5, wherein the first material layer is a silicon material that is poly-silicon or amorphous silicon.

9. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 6, wherein the second material layer is a silicon material that is poly-silicon or amorphous silicon.

10. (PREVIOUSLY PRESENTED) The structure of a micro electro mechanical system of claim 7, wherein the material of the spacer is a silicon material that is poly-silicon or amorphous silicon.

11. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 5, wherein the first material layer is a dielectric material that is silicon oxide, silicon nitride, or silicon oxynitride.

12. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 6, wherein the second material layer is a dielectric material that is silicon oxide, silicon nitride, or silicon oxynitride.

13. (PREVIOUSLY PRESENTED) The structure of a micro electro mechanical system of claim 7, wherein the material of the spacer is a dielectric material that is silicon oxide, silicon nitride, or silicon oxynitride.

14. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 5, wherein the first material layer is a transparent conductor material that is indium tin oxide, indium zinc oxide, or indium oxide.

15. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 6, wherein the second material layer is a transparent conductor material that is indium tin oxide, indium zinc oxide, or indium oxide.

16. (PREVIOUSLY PRESENTED) The structure of a micro electro mechanical system of claim 7, wherein the material of the spacer is a transparent conductor material that is indium tin oxide, indium zinc oxide, or indium oxide.

17. (CURRENTLY AMENDED) A structure of a micro electro mechanical system, comprising:

a first electrode;

a second electrode comprising:

a first material layer; and

a conductor layer set on the first material layer and approximately in parallel to the first electrode; and

a supporter configured to separate the first electrode from the first material layer to form a cavity;

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wherein the first material layer is adapted to protect the second electrode from etching when a sacrificial layer between the first electrode and the first material layer is removed through a structure release etch process to form the cavity;

The structure of a micro electro mechanical system of claim 5, wherein the first material layer is a macromolecule polymer that is paraffin or a macromolecule material that can be coated by vapor.

18. (CURRENTLY AMENDED) A structure of a micro electro mechanical system, comprising:

a first electrode;

a second electrode comprising:

a first material layer; and

a conductor layer set on the first material layer and approximately in parallel to the first electrode;

a supporter configured to separate the first electrode from the first material layer to form a cavity; and

a second material layer covering the second electrode;

wherein the first material layer is adapted to protect the second electrode from etching when a sacrificial layer between the first electrode and the first material layer is removed through a structure release etch process to form the cavity;

The structure of a micro electro mechanical system of claim 6, wherein the second material layer is a macromolecule polymer that is paraffin or a macromolecule material that can be coated by vapor.

19. (PREVIOUSLY PRESENTED) The structure of a micro electro mechanical system of claim 7, wherein the material of the spacer is a macromolecule polymer that is paraffin or a macromolecule material that can be coated by vapor.

20. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the thickness of the first material layer is about several angstroms to 2000 angstrom.

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21. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the thickness of the first material layer is preferably about 200 angstrom to 1000 angstrom.

22. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 3, wherein the thickness of the second material layer is about several angstroms to 2000 angstrom.

23. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 3, wherein the thickness of the second material layer is preferably about 200 angstrom to 1000 angstrom.

24. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the material forming the supporter is selected from the group consisting of one or more of positive photoresists, negative photoresists, acrylic resins, and epoxy resins.

25. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the material of forming the conductor layer is metal material.

26. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 1, wherein the second electrode is a movable electrode.

27. (CURRENTLY AMENDED) A pre-release structure configured to form [[of]] a micro electro mechanical system upon removal of a sacrificial layer through a structure release etch process, said micro electro mechanical system suitable to use on an optical interference display cell, the pre-release structure of a micro electro mechanical system comprising:

a first electrode that is partially transmissible and partially reflective;

a second electrode that is reflective set approximately in parallel to the first electrode;

a material layer covering a side of the second electrode that is facing the first electrode; [[and]]

a sacrificial layer positioned between the material layer and the first electrode; and

a supporter configured to separate the first electrode from the material layer and forming a cavity;

wherein the second electrode is susceptible to etching by an etchant suitable to remove the sacrificial layer and wherein the material layer is adapted to protect the second electrode from etching when [[a]] the sacrificial layer between the first electrode and the material layer is removed through a structure release etch process to form the cavity using the etchant.

28. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 27, wherein the material of the sacrificial layer is selected from the group consisting of dielectric material, metal material, and silicon material.

29. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 27, wherein the material of the material layer is selected from the group consisting of silicon material, dielectric material, transparent conductor material, macromolecule polymer, metal oxide and any arbitrary combination thereof.

30. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 29, wherein the material of the material layer is a silicon material that is poly-silicon or amorphous silicon.

31. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 29, wherein the material of the material layer is a dielectric material that is silicon oxide, silicon nitride, or silicon oxynitride.

32. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 29, wherein the material of the material layer is a transparent conductor material that is indium tin oxide, indium zinc oxide, or indium oxide.

33. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 29, wherein the material of the material layer is a macromolecule polymer that is paraffin or a macromolecule material that can be coated by vapor.

34. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 27, wherein the thickness of the material layer is about several angstroms to 2000 angstrom.

35. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 27, wherein the thickness of the material layer is preferably about 200 angstrom to 1000 angstrom.

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36. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 27, wherein the material forming the supporter is selected from the group consisting of one or more of positive photoresists, negative photoresists, acrylic resins, and epoxy resins.

37. (CURRENTLY AMENDED) The pre-release structure of a micro electro mechanical system of claim 27, wherein the second electrode is a movable electrode.

38-73. (CANCELLED)

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SUMMARY OF INTERVIEW

The Applicants wish to thank the Examiner for the telephonic interview conducted on August 14, 2006. Claim 1 was discussed in view of Miles (U.S. Patent No. 5,835,255). The Applicants explained the intended meaning of the claim language and pointed out the differences in the structures disclosed in Miles as compared to the claimed structures. The Examiner stated that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims.